



PATENT COOPERATION TREATY
PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

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| Applicant's or agent's file reference BR3548MPS/PJ | FOR FURTHER ACTION | See Form PCT/IPEA/416 |
| International application No. PCT/FR2004/000929 | International filing date (day/month/year) 15.04.2004 | Priority date (day/month/year) 16.04.2003 |
| International Patent Classification (IPC) or national classification and IPC | | |
| Applicant SICAT | | |
| <p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 4 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> (<i>sent to the applicant and to the International Bureau</i>) a total of _____ sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (<i>sent to the International Bureau only</i>) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p> <p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p> | | |

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|---|-----------------------------------|
| Date of submission of the demand | Date of completion of this report |
| Name and mailing address of the IPEA/EP | Authorized officer |
| Facsimile No. | Telephone No. |

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/FR2004/000929

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
 - This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:
 - international search (Rule 12.3 and 23.1(b))
 - publication of the international application (Rule 12.4)
 - international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):
 - the international application as originally filed/furnished
 - the description:

pages 1-18 as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____
 - the claims:

nos. 1-7 as originally filed/furnished

nos.* _____ as amended (together with any statement) under Article 19

nos.* _____ received by this Authority on _____

nos.* _____ received by this Authority on _____
 - the drawings:

sheets 1/2-2/2 as originally filed/furnished

sheets* _____ received by this Authority on _____

sheets* _____ received by this Authority on _____
 - a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. The amendments have resulted in the cancellation of:
 - the description, pages _____
 - the claims, nos. _____
 - the drawings, sheets/figs _____
 - the sequence listing (*specify*): _____
 - any table(s) related to sequence listing (*specify*): _____
4. This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
 - the description, pages _____
 - the claims, nos. _____
 - the drawings, sheets/figs _____
 - the sequence listing (*specify*): _____
 - any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/FR2004/000929

| Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement | |
|--|---|-----------|
| 1. Statement | | |
| Novelty (N) | Claims | 1 - 7 YES |
| | Claims | - NO |
| Inventive step (IS) | Claims | 1 - 7 YES |
| | Claims | - NO |
| Industrial applicability (IA) | Claims | 1 - 7 YES |
| | Claims | - NO |
| 2. Citations and explanations (Rule 70.7) | | |
| 1. Reference is made to the following documents: | | |
| D1: | US-A-5 560 809 (CORTELLINI EDMUND A) 1 October 1996 (1996-10-01) | |
| D2: | US-A-5 474 587 (DIAS FRANCISCO J ET AL) 12 December 1995 (1995-12-12) | |
| D3: | US 2002/011683 A1 (GADKAREE KISHOR P ET AL) 31 January 2002 (2002-01-31) | |
| D4: | EP-A-0 356 800 (SHINETSU CHEMICAL CO) 7 March 1990 (1990-03-07) | |
| D5: | US-A-4 455 385 (PROCHAZKA SVANTE) 19 June 1984 (1984-06-19) | |
| D6: | US-A-4 562 040 (YAMADA KOICHI ET AL) 31 December 1985 (1985-12-31) | |
| D7: | US-A-5 196 389 (DUBOTS DOMINIQUE) 23 March 1993 (1993-03-23) | |
| D8: | US-A-4 514 346 (DIAS FRANCISCO J ET AL) 30 April 1985 (1985-04-30) | |
| D9: | US-B-6 245 4241 (LAU SAI-KWING ET AL) 12 June 2001 (2001-06-12) | |
| D10: | US-A-3 205 043 (TAYLOR KENNETH M) 7 September 1965 (1965-09-07) | |
| D11: | DATABASE COMPENDEX [Online] ENGINEERING | |

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/FR2004/000929

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

INFORMATION, INC., NEW YORK, NY, US; HUANG

QINGWEI ET AL: "Micro-structure of reaction-bonded silicon carbide" XP002264185 Database accession no. E2000455311603

2. The subject matter of claims 1 to 7 appears to meet the requirements of PCT Article 33(2) and (3). The reasons are as follows:

D1 discloses the use of a SiC-based material as a lining for an aluminium-smelting furnace. However, it does not disclose a material containing inclusions, of which at least a portion is α -SiC, in a β -SiC matrix.

The other documents disclose SiC-based materials containing the α -SiC and β -SiC varieties for different uses.

3. The subject matter of claim 1 appears to meet the requirements of PCT Rule 13.1 (unity of invention) because the uses all relate to improved resistance in harsh environments.